STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

January 21, 2016

Via Docket Upload, Email, and First Class Mail
U.S. Environmental Protection Agency
Gina McCarthy, *Administrator*
EPA Docket Center
ATTN: Docket ID Number EPA-HQ-OAR-2015-0199
Mail Code 2821T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
a-and-r-docket@epa.gov

RE: Tennessee Department of Environment and Conservation Comments regarding EPA's Clean Power Plan Proposed Federal Plan Requirements and Model Trading Rules, Docket ID Number EPA-HQ-OAR-2015-0199

Dear Administrator McCarthy:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the U.S. Environmental Protection Agency's (EPA) proposed Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Construction on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations (hereinafter referred to as the proposed federal plan and model rules).[1] TDEC is the environmental agency in Tennessee with responsibility for implementing regulatory programs under the Clean Air Act (CAA) and for developing and overseeing programs and initiatives that promote and support energy conservation, energy efficiency (EE) and renewable energy (RE) measures, and economic development through clean energy technology. TDEC strives to improve and maintain the quality of its air resources such that they are protective of human health and the welfare of Tennesseans while maximizing employment and enhancing economic development within the State. We are also cognizant of power sector emission reductions achieved to date. Across its system, the Tennessee Valley Authority[2] has diversified its generation portfolio and reduced carbon emissions by more than 30 percent since 2005. TDEC also recognizes that Tennesseans enjoy reliable, low-cost electricity, making Tennessee an attractive place to live, work and play. Securing and supporting a clean energy future is critical to the State's continued prosperity. These goals serve as the lens through which we prepared on comments on EPA's proposed federal plan and model rules.

At this time TDEC has refrained from taking a position on the legality of the Clean Power Plan. Instead, we feel it is important for Tennessee to develop a compliance plan that meets the needs of its unique generation portfolio,

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[1] Federal Plan Requirements for Greenhouse Gas Emissions From Electric Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule. 80 Federal Register No. 205. (October 23, 2015). U.S. EPA. https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22848.pdf, p. 64966-65116. (to be codified at 40 CFR Parts 60, 62, and 78). Hereinafter referred to *as* 80 Fed. Reg.

[2] The Tennessee Valley Authority is the only utility in the state of Tennessee with affected units subject to the Clean Power Plan.

electricity distribution and delivery structure, ratepayers, and other state-specific circumstances. Taking an active role in the rule proposal and commenting process is central to this end. TDEC commends EPA for its unprecedented efforts to work with states and other critical stakeholders throughout the process of developing the Clean Power Plan and its related components, and we hope this level of outreach continues throughout implementation.

TDEC offers the following summary of its more significant comments on components of the proposed federal plan and model rules. A detailed discussion of our comments on specific elements of the proposal follows this summary in response to EPA's requests for input.

EPA should finalize a federal plan approach in advance of promulgation. While TDEC recognizes that EPA does not have authority to finalize a federal plan unless there is a state to which the federal plan can be applied,[3] failure to provide a date certain or structure for a federal plan does not provide states with the information required to decide if implementation of a federal plan, either by choice or through federal requirement, is a fitting compliance approach within their state that would preserve the provision of affordable and reliable electricity. By not communicating that approach prior to enactment, EPA is decreasing the flexibility and predictability that it claims to offer states. With this in mind, we recommend that EPA consider finalizing a federal plan approach or approaches in Summer 2016, concurrent with the planned finalization of the model rules.

Regardless of federal plan approach, EPA should ensure that its federal plan cultivates a competitive trading market that readily links with trading systems of other states and preserves state flexibilities. Given that our analysis of the myriad plan approaches and resulting impacts to electricity provision, reliability, and affordability is still ongoing, we do not feel confident endorsing one federal plan approach over another at this time. Irrespective of federal plan approach, it is of utmost importance to TDEC that EPA ensures that the approach fosters a competitive trading market administered with relative administrative ease and capable of linking with trading systems established by other federal and state plans. TDEC also advocates for states to maintain the ability to take over various aspects of federal plan design and implementation.

A reliability safety valve should be included in the federal plan. TDEC disagrees with EPA's proposed exclusion of a reliability safety valve within the federal plan. EPA's claim that trading supports reliability may be sound, however until market performance can be observed that is supportive of reliability, this conclusion is not foregone. TDEC recommends that EPA finalize a federal plan that includes a reliability safety valve, and like the final emission guidelines, specify conditions under which the safety valve would be triggered in a state subject to a federal plan.

EPA should make a concerted effort to advance a competitive trading market for both trading plan approaches. TDEC is generally supportive of EPA's proposed required conditions for linkage to the federal plan for trading purposes as well as EPA's proposed provisions for interstate trading, provided that state plans and trading systems meet EPA requirements. However, TDEC remains concerned that should few states pursue one state plan approach over another (e.g., mass-based over rate-based or vice versa), the expectation of a competitive market for compliance instrument trading is unreasonable due to potential for limited market participation.

EPA should expand the scope of resources eligible for receiving emission rate credits (ERCs) in a rate-based federal plan. We recommend expanding the scope of ERC-eligible emission reduction measures for the purposes of a rate-based federal plan to any other RE or EE emissions reduction measures with an established history of proven and readily-quantifiable emissions reductions that would meet EM&V requirements of the final emission guidelines.

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[3] 42 U.S.C. §7411(d)(2) states that EPA does not have authority to finalize a federal plan unless there is a state to which a federal plan can be applied following a finding of failure to submit a state plan or disapproval of a state plan.

EPA must find an appropriate equilibrium between verifying project generation or savings with the cost and effort required to conduct evaluation, measurement, and verification (EM&V) and measurement and verification (M&V) according to requirements in a rate-based trading approach. TDEC feels strongly that EPA must balance what is necessary to verify project generation or savings with the cost and effort required to meet EM&V and M&V requirements so as not to serve as a disincentive for pursuing emissions reductions measures. However, TDEC also recognizes that consistency is important and EPA should attempt to align EM&V and M&V requirements with states' existing protocols. Additionally, TDEC recommends that EPA explore opportunities to pursue formulaic crediting for common federally- and state-administered or funded EE programs, such as the U.S. Department of Energy's Weatherization Assistance Program. Establishing a formulaic approach would enable states to streamline processes for crediting emissions reductions under these programs while creating consistency with regard to EM&V across all states.

EPA should take responsibility for approving independent verifiers in a rate-based trading approach. TDEC generally supports EPA proposed qualifications for independent verifiers, but recommends that EPA consider taking responsibility for approving independent verifiers and making that list publicly available not only in the rate-based federal plan context, but in any plan context. This would significantly streamline state review of project submittals while also creating predictability and consistency of implementation of verifier requirements across all states.

EPA should allocate allowances in a mass-based trading approach to affected EGUs based on average share of historical emissions over the 2010-2012 period. TDEC is not supportive of EPA's proposed allocation of allowances to affected EGUs based on average share of historical generation over the 2010-2012 period, but instead advocates for distribution of allowances based on historical emissions over the 2010-2012 period. This alternative approach is more consistent with EPA's BSER determination, and provides allocations to those units requiring the greatest reduction under the guidelines.

EPA should issue allowances in a mass-based trading approach to units that operated in the historical data set but have since retired and should not allocate allowances from retired units to the RE-set aside unless they are to be replaced by units which would not be subject to the Clean Power Plan. The Clean Power Plan requires utilities to take various steps to reduce emissions in order to comply with emissions standards, including but not limited to reducing emissions from coal fleets via reduction in use or retirement, shifting generation to NGCC, and increasing renewable generation. In order to be able to continue to operate fossil fuel-fired units, a utility will need to utilize allocations made available through implementation of compliance measures, including those resulting from the retirement of existing coal-fired units.

EPA should expand the RE set-aside in a mass-based trading approach to include new nuclear capacity, and other non-BSER RE and EE measures, provided that they are capable of meeting documentation and projection-based EM&V requirements. The construction, operation, and implementation of zero-emitting resources can reduce the risk of leakage while providing reliable, zero-emitting, and cost-effective electricity and therefore should be eligible for allowances as part of the RE set-aside. This also provides states with flexibility to determine which resources are best suited to meet each state's generation and compliance needs.

EPA should consider the date of the publication of the Clean Power Plan in the Federal Register, October 23, 2015, as the commencement date for a project to qualify as eligible for the Clean Energy Incentive Program (CEIP). This would broaden the scope of potential, eligible projects, all of which would be capable of producing savings in 2020 and/or 2021, that are additional to those required during the Clean Power Plan compliance period. An earlier qualification date for CEIP projects would also eliminate any incentive to delay CEIP projects until just before 2020, thus ensuring financial and environmental benefits earlier in the implementation process.

EPA should structure the matching pool of CEIP credits such that it provides maximum flexibility to states for determining how to allocate credits for wind/solar projects and EE projects in low-income communities. This

would result in allowing both types of projects, wind/solar and EE in low-income communities, to compete for the state's pool and states could make decisions regarding projects based on the characteristics of projects received.

EPA should add language that specifies that if EPA has not approved or disapproved a 111(d) plan or revision within the 12 month deadline, that the plan or revision shall be deemed approved on that 12-month deadline. TDEC's experience shows that EPA does not always meet deadlines currently required for section 110 and section 111(d) plan approvals, and adding this provision would provide a consequence for failure to meet stated deadlines.

In closing, TDEC appreciates the opportunity to comment on the development of a federal plan and model rules for the purposes of the Clean Power Plan and hopes that this input is of value to EPA. We commend EPA for the continued development of a comprehensive framework for reducing CO_2 emissions from the electric power sector and recognize the significant investment of thought, time, and resources that this effort has required. The outreach that EPA has provided throughout development of all aspects of the Clean Power Plan is unprecedented, and we hope this engagement with stakeholders will continue as the remaining aspects of the Clean Power Plan are finalized and states initiate compliance efforts.

Sincerely,

Robert J. Martineau, Jr.
Commissioner
Tennessee Department of Environment and Conservation

cc: Janet McCabe, *Acting Assistant Administrator of the Office of Air and Radiation*, EPA
Kendra Abkowitz, PhD, *Director of Office of Policy and Planning*, TDEC
Molly Cripps, *Director of Office of Energy Programs*, TDEC
Shari Meghreblian, PhD, *Deputy Commissioner of Bureau of Environment*, TDEC
Michelle Walker Owenby, *Director of Division of Air Pollution Control*, TDEC
Lauran Sturm, *Assistant General Counsel*, TDEC

Tennessee Department of Environment and Conservation Expanded Comments regarding EPA's Clean Power Plan Proposed Federal Plan Requirements and Model Trading Rules, Docket ID Number EPA-HQ-OAR-2015-0199

I. Background

In June 2013, President Obama issued a Climate Action Plan that details a variety of actions the executive branch will undertake to reduce greenhouse gas emissions. The Plan specifically calls for a reduction in CO_2 emissions from power plants; therefore, President Obama issued a Presidential Memorandum that directed EPA to complete carbon pollution standards, regulations or guidelines for modified, reconstructed and existing power plants by June 1, 2015. EPA issued the proposed guidelines under Section 111(d) of the CAA in June 2014.[4] After evaluating over two million comments received from the public, President Obama and EPA announced final guidelines for CO_2 emission performance standards for affected electric generating units, (EGUs), also known as the Clean Power Plan,[5] on August 3, 2015.[6] Concurrent with the release of this proposal, EPA also proposed federal plan requirements and model trading rules, one for rate-based trading and one for mass-based trading, as readily available paths for states to implement the Clean Power Plan.[7] EPA would implement the federal plan in any state that does not submit an approvable plan. The model trading rules can be adopted and are presumptively approvable by EPA, or can be tailored by states to implement the final emission guidelines. EPA intends to finalize both the rate-based and mass-based model trading rules in summer 2016 and either a rate-based or mass-based federal plan upon the need to implement it within a state.

Given that the regulatory text of EPA's proposed federal plans and corresponding model rules is identical except where indicated by EPA,[8] our comments below regarding rate-based and mass-based approaches are similarly intended to apply to both the proposed federal plan and model rules unless specifically noted otherwise.

II. Federal Plan and Issues Common to Both Trading Approaches

Section 111 of the CAA requires EPA to develop, implement, and enforce a federal plan to cover existing EGUs located in states that do not have an approved plan. Moreover, EPA indicates that stakeholders, states in particular, have expressed a desire to obtain the design of a federal plan. To this end, EPA proposes both a rate-based trading approach and a mass-based trading approach to a federal plan. Both proposed approaches to the federal plan would require affected EGUs to meet emission standards set using the CO_2 emission performance rates finalized in the final emission guidelines.[9] EPA will only promulgate a final federal plan for affected EGUs in states which it has determined have failed to submit an approvable plan by the deadlines specified in the final Clean Power Plan. Alternatively, states may choose to accept a federal plan rather than develop a state plan by not submitting a state plan.[10]

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[4] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule, 79 Federal Register No. 117. (June 18, 2014). U.S. EPA. https://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13726.pdf, p. 34830-34958.

[5] Hereinafter referred to as the Clean Power Plan or final emission guidelines.

[6] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Federal Register No. 205. (October 23, 2015). U.S. EPA. https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf, p. 64661-65120. (to be codified at 40 CFR Part 60).

[7] 80 Fed. Reg. at 64968. EPA proposes four actions: (1) A rate-based federal plan for each state with affected EGUs; (2) a mass-based federal plan for each state with affected EGUs; (3) a rate-based model trading rule for potential use by any state; and (4) a mass-based model trading rule for potential use by any state. The regulatory text of each federal plan and corresponding model rule is identical unless indicated by EPA.

[8] *Id.*

[9] *Id.*

[10] *Id.*

While EPA proposes both a rate-based trading approach and a mass-based trading approach as a federal plan, it intends to finalize a single approach, either rate-based or mass-based, for every state in which it promulgates a federal plan, citing the following purported benefits of a single approach: consistency, economies of scale, efficient administration, and simplified compliance planning associated with selecting a single plan approach.[11] However, EPA does not intend to finalize the federal plan until it determines that there is a need to implement a federal plan within a state.[12] Therefore as proposed, there is no date certain associated with finalizing a federal plan.

TDEC does not disagree with the benefits EPA purports to be associated with finalizing a single federal plan approach and recognizes that EPA does not have authority to finalize a federal plan unless there is a state to which a federal plan can be applied following a finding of failure to submit a state plan or disapproval of a state plan.[13] However, finalizing a single federal plan only upon the determination that a state has not submitted an approvable plan fails to provide states with the information required to decide if implementation of a federal plan, either by choice or through federal requirement,[14] is a fitting compliance approach within their state that would preserve the provision of affordable and reliable electricity. In fact, the decision as to whether a rate-based or mass-based plan is well-suited for a state is one of the foremost considerations states will make as they contemplate Clean Power Plan implementation, and states are currently investing significant resources in conducting analyses which will help to inform their decisions for plan approach. By not communicating that approach prior to enactment, EPA may decrease the flexibility that it claims to provide states in the Clean Power Plan while potentially increasing compliance costs. We recognize that states have ample flexibility offered through development and implementation of a state plan as finalized in the emission guidelines. However, for states wishing to voluntarily adopt a federal plan, postponing finalization of the federal plan until implementation is required will place states in a position where there is limited predictability of federal plan requirements. Therefore, they run the risk of receiving and implementing a federal plan approach that is not desired nor optimal for efficient and cost-effective electricity generation and distribution within their state. With this in mind, ***we recommend that EPA consider finalizing a federal plan approach or approaches in Summer 2016, concurrent with the planned finalization of the model rules***.

EPA also requests comment on which approach, either a rate-based trading approach or mass-based trading approach, should be selected if a single approach is finalized.[15] Based on its evaluation of the final emission guidelines to date, TDEC has determined that it is highly likely to submit an initial plan submittal and request for extension in September 2016 due to the need for additional time to consider which plan approach (e.g., rate-based or mass-based), is best-suited for plan implementation Tennessee. Given that our analysis of the myriad plan approaches and resulting impacts to electricity provision, reliability, and affordability is still ongoing, ***we do not feel confident endorsing one federal plan approach over another at this time. Regardless of federal plan approach, it is of utmost importance to TDEC that EPA ensures the approach fosters a competitive trading market administered with relative administrative ease and capable of linking with trading systems established by other federal and state plans. We also encourage EPA to maintain proposed elements of flexibility throughout the final federal plan, such as the ability for a state to take over various aspects of federal plan design and implementation.***

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[11] *Id.* at 64969-64970.
[12] *Id.*
[13] 42 U.S.C. §7411(d)(2).
[14] 80 Fed. Reg. at 64974, Reference Note 13. EPA indicates it is interested in hearing whether or not states would be interested in accepting a federal plan in lieu of development and submittal of a state plan. TDEC has not ruled out the possibility of accepting a federal plan.
[15] *Id.*

a. Trading & Interactions with State Plans

As proposed, affected EGUs in any state covered by a federal plan could trade compliance instruments with affected EGUs in any other state covered by a federal plan or a state plan meeting the following conditions for linkage to the federal plan: (1) the state plan must be approved; (2) the state plan must implement the same type of trading program as the federal plan trading program; (3) the state plan must use the identical compliance instrument as the federal plan; (4) the state plan must be approved as a ready-for-interstate-trading plan; and (4) the state plan must use an EPA-administered tracking system.[16] TDEC is generally supportive of EPA's proposed required conditions for linkage to the federal plan for trading purposes as they will establish a consistent national framework within which states can effectively trade compliance instruments.

EPA requests comment on expanding the scope of interstate trading to include linking states covered by the federal plan with any state that has an approved rate-based (in the case of a rate-based federal plan) or mass-based (in the case of a mass-based federal plan) trading state plan meeting the proposed conditions for linkages and that uses an EPA-designated emission reduction credit (ERC) or allowance tracking system that is interoperable with an EPA-administered ERC or allowance tracking system.[17] We are supportive of these proposed expansions of interstate trading, provided that systems and plans meet EPA requirements and are designated as meeting those requirements via registration or some other means, as they would increase competition within respective trading markets while maintaining the integrity of compliance-instrument tracking systems. In fact, EPA indicates that it expects compliance trading markets to be competitive. ***However, TDEC remains concerned that should few states pursue one state plan approach over another (e.g., mass-based over rate-based or vice versa), the expectation of a competitive market for compliance instrument trading is unreasonable due to potential for limited market participation***.[18] We recommend that EPA consider the potential for these circumstances when it finalizes the federal plan and trading approaches.

As proposed, within a mass-based federal plan approach, allowances would be issued in short tons. Therefore, EPA proposes to limit linkage between mass-based federal plans to state plans which also issue allowances in short tons. However, EPA also requests comment on whether it should extend linkage to mass-based state plans that issue allowances in metric tons.[19] TDEC has no objections to expanding linkage of a mass-based federal plan issuing allowances in short tons to mass-based state plans issuing allowances in metric tons provided that EPA's tracking system provides a standard conversion[20] between short tons and metric tons which states can use for trading purposes.

EPA's proposal notes that it anticipates the likelihood of market manipulation to be low based on years of experience with prior implementation of other emissions trading programs. However, the agency is requesting comment on what market monitoring activities, if any, would be appropriate for EPA to take in a rate-based context, such as tracking ownership of allowances or ERCs, oversight of the creation and verification of credits, and tracking market activity.[21] TDEC supports EPA's performance of any of these potential market monitoring activities, as it would provide market oversight and analytics from a non-biased source and encourage consistency across states during Clean Power Plan implementation. Specifically, ***TDEC recommends that EPA take on the responsibility of verification of allowances or ERCs***. For states such as Tennessee currently lacking an established infrastructure for verification of any energy-related crediting mechanisms (e.g., those used for compliance with Renewable Power Standards, Energy Efficiency Resource Standards, or existing emissions trading programs), developing a system capable of validating credits presents a considerable administrative lift.

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[16] *Id.* at 64976-64977.
[17] *Id.* at 64977.
[18] *Id.*
[19] *Id.*
[20] Such as 1 short ton = 1 metric ton x 1.1023.
[21] 80 Fed. Reg. at 64977.

b. Reliability

The final Clean Power Plan provides states with a reliability safety valve that can be used in the event of an unanticipated emergency that would cause maintaining electric reliability to be at odds with affected EGU emission performance standards in a state plan. However, EPA proposes to exclude such a reliability safety valve from the federal plan, based on the claims that: the federal plan does not impose inflexible requirements on plants; a trading mechanism supports reliability by providing EGUs the capability of obtaining allowances or credits when needed; and EPA is considering reliability, just as states are required to do, in developing the federal plan.[22] ***We disagree and feel strongly that a reliability safety valve is necessary for inclusion in a federal plan. EPA's claim that trading supports reliability may be sound, however until we can observe market performance that is supportive of reliability, this conclusion is not foregone. Therefore TDEC recommends that EPA finalize a federal plan that includes a reliability safety valve, and like the final emission guidelines, specify conditions under which the safety valve would be triggered in a state subject to a federal plan.***

While not included in the proposed mass-based federal plan, EPA requests comment on the creation of an allowance set-aside for the purpose of making allowances available in emergency circumstances in which an affected EGU was compelled to provide reliability critical generation and demonstrated that a supply of allowances needed to offset its emissions was not available.[23] TDEC would be supportive of the development of reliability set-aside, provided that the allowances allocated to the set-aside are newly created allowances additional to a state's current mass emissions budget stated in the final guidelines.

c. Implications for Other EPA Programs and Rules – Title V

As proposed, for sources subject to title V, the requirements applicable to them under the proposed federal plan will be "applicable requirements" under title V in the form of an emission standard and related requirements for CO_2 on affected EGUs, and therefore, will need to be addressed in title V permits. As such, an affected EGU may be required to modify its existing title V permit, or obtain a new permit if it does not already have one if it becomes subject to an emission standard for CO_2 under a CAA section 111(d) federal plan.[24] The EPA is proposing that any changes that may be required to an operating permit with respect to a trading program under the federal plan may be made using the minor permit modification procedures of the title V rules. EPA expects such changes to be infrequent, and notes that this proposed approach is similar to that adopted in the final Cross-State Air Pollution Rule (CSAPR), for which EPA recently issued guidance to assist permitting authorities and sources subject to CSAPR with incorporating CSAPR requirements into title V permits.[25] EPA requests comment on this proposed approach and whether it would be useful to develop guidance similar to the guidance developed for permitting under CSAPR.[26] TDEC is supportive of the creation of guidance to assist states and sources subject to a federal plan under the Clean Power Plan for incorporating Clean Power Plan requirements into title V permits.

III. Rate-Based Approach

As proposed, EPA's rate-based approach to a federal plan and model rule would apply the subcategorized emission rate standards and glide path of interim step compliance periods finalized in the emission guidelines to affected EGUs (1,305 lb/MWh CO_2 final rate for fossil-steam and 771 lb/MWh CO_2 final rate for natural gas combined cycle (NGCC)). Affected EGUs subject to a rate-based federal plan or model rule would be required to demonstrate compliance by achieving a stack emission rate less than or equal to the rate-based emission standard or by applying ERCs, acquired by each EGU, to the measured stack emissions rate. In the context of a federal

[22] *Id.* at 64982.
[23] *Id.* at 64982.
[24] *Id.* at 64984.
[25] *Id.* at 64985.
[26] *Id.*

plan, EPA would act as the issuer of ERCs and implementer and enforcer of the standards of performance for affected EGUs.[27] In the context of a state's adoption or tailoring of the rate-based model rule, the state would act as the issuer of ERCs and implementer and enforcer of the standards of performance for affected EGUs. As proposed, under the federal plan, ERCs will be issued by EPA to four categories of entities: (1) affected EGUs that perform at a rate below the applicable rate-based emission standard; (2) affected NGCC units for all generation; (3) new nuclear units and capacity uprates at existing nuclear units; and (4) wind, solar, geothermal power, and hydropower providers that develop metered projects and programs whose results are quantified and verified according to evaluation, measurement, and verification (EM&V) criteria specified in the federal plan and model rules. An additional category, other low- and zero-emitting non-BSER measures, such as biomass fuels and demand-side EE programs, is included in the proposed rate-based model trading rule, but excluded from the proposed rate-based federal plan.[28]

TDEC is supportive of EPA's proposed use of subcategorized emission rates within a rate-based federal plan and model rule as there is no other readily identifiable means for EPA to achieve consistent application of emissions rates across different types of power plants in different states. Additionally, we agree with EPA's proposed use of ERCs as the crediting mechanism for achieving compliance under both a rate-based federal plan and model rule.

TDEC also acknowledges EPA's justification for selection of ERC-eligible resources under a rate-based federal plan. These resources were used to quantify CO_2 emission performance rates in the final emission guidelines (with the exception of nuclear power) and are readily quantifiable due to their existing metering infrastructure.[29] However, other non-BSER emission reduction measures, including but not limited to utility EE programs, building codes, guaranteed energy performance contracting, and wastewater treatment plant EE projects, have a history of quantifiable reductions in electricity consumption, which could be incorporated into an ERC issuance approach under a rate-based federal plan so long as they meet the minimum EM&V requirements included in the final emission guidelines. Moreover, these emissions reductions measures would be recognized, albeit indirectly, within a mass-based federal plan, so from a consistency perspective should be included. Therefore, ***we recommend expanding the scope of ERC-eligible emission reduction measures for the purposes of a rate-based federal plan to any other RE or EE emissions reduction measures with an established history of proven and readily-quantifiable emissions reductions that would meet EM&V requirements of the final emission guidelines***, as this would enable states operating under a federal plan to receive credit for a broader range of emissions reductions measures that are being implemented and may increase flexibility and reliability while reducing compliance costs.

a. ERC Tracking and Compliance

EPA proposes that a rate-based federal trading program would use its existing Allowance Tracking and Compliance System (ATCS) for tracking the trading of ERCs held by affected EGUs (compliance accounts) as well other entities (general accounts) and for provision of data to the ERCs market and public.[30] Information such as record of ownership, dates of ERC transfers, buyer and seller information, origin of ERCs, serial numbers of ERCs transferred, and ERC type would be included within ATCS. Price information would be excluded from ATCS as it is EPA's position that private parties are in a better position to obtain and disseminate timely, accurate price information.[31] ATCS would be designed such that it would meet all aspects of the requirements for tracking systems finalized in the Clean Power Plan.[32]

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[27] *Id.* at 64989-64990.
[28] *Id.* at 64994.
[29] *Id.*
[30] *Id.* at 64997. Specifically, ATCS would be used to track the generation of ERCs, holdings of ERCs in compliance accounts for affected EGUs and general accounts for other entities or affected EGUs under a state trading plan, deduction of ERCs for compliance purposes, and transfers of ERCs between accounts.
[31] *Id.* at 64998.
[32] *Id.*

As proposed, by November 1 of the year following the end of the compliance period, affected EGUs subject to a rate-based federal plan are required to meet compliance obligations. An EGU's average emission rate over the compliance period would be calculated based on submitted data to ATCS and compared to the emission standards that the affected EGU is subject to during the corresponding compliance period. Accordingly, the appropriate number of ERCs will be retired from the affected EGU's compliance account to adjust its emission rate such that it is equal to the emission standard.[33]

At the end of each calendar year, EPA would calculate the ERCs generated for affected EGU and non-EGU ERC generators based on data submitted to EPA through the Emissions Collection and Monitoring Plan System (ECMPS), which would be proposed as part of a Notice of Data Availability (NODA). Following the NODA comment period, ERCs would be issued in accordance with the NODA to compliance and general accounts.[34] EPA is also proposing the creation of a complementary tracking system for ERC issuance, which would provide access to RE project and program eligibility application, regulatory approvals, activities of accredited third party verifiers, and report generation. As proposed, eligibility applications would be accepted by EPA on an annual basis and subsequently reviewed and approved by EPA in a federal plan scenario.[35] Providers would then be required to submit a measurement and verification (M&V) report to EPA prior to issuance of ERCs no later than 6 months after the end of each year.[36] ***TDEC is generally supportive of EPA's proposed approach for ERC generation and issuance under a rate-based trading plan approach. With regard to intervals at which ERC issuance should occur, TDEC believes that any more frequent issuance of ERCs could become administratively burdensome.***

EPA also proposes that RE generation in a mass-based state plan can be used for compliance in a state with a rate-based federal plan if a power delivery contract or power purchase agreement demonstrates that an entity in the rate-based state has contracted for the supply of the MWhs in question and documents that the electricity was treated as comparable to a generation resource used to serve regional load that included the rate-based state.[37] TDEC is supportive of EPA's proposed requirements.

b. EM&V

EPA also proposes EM&V requirements for verification of MWh from RE, demand-side EE, and other eligible measures used to generate ERCs or otherwise adjust an emission rate that it intends to be consistent with industry best-practices and specifies separate requirements for RE, nuclear, non-affected combined heat and power, biomass, waste-to-energy, and demand-side EE as they relate to federal plan and model rule approaches.[38] TDEC feels strongly that EPA must balance what is necessary to verify project generation or savings with the cost and effort required to meet EM&V and M&V requirements so as not to serve as a disincentive for pursuing emissions reductions measures. However, TDEC also recognizes that consistency is important and EPA should attempt to align EM&V and M&V requirements with states' existing protocols.

According to the proposal, when a project is initiated, ERC providers are required to develop and submit to the state or EPA an EM&V plan that documents how requirements for quantification and verification will be addressed as EM&V is performed over the program or project period. After implementation has occurred, the ERC provider must submit periodic M&V reports, which include resulting MWh savings or generation values on

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[33] *Id.* The compliance period average would be calculated by taking the measured CO_2 mass in units of pounds summed over the compliance period for an affected EGU and dividing it by the total net energy output over the compliance period for that affected EGU in MWh.
[34] *Id.* at 64998-64999.
[35] *Id.* at 64999.
[36] *Id.* at 64500.
[37] *Id.* at 64978.
[38] *Id.* 65002-65006.

a retrospective or real-time basis, to document and describe how each of the requirements were applied. EPA also goes into specific details regarding information required as part of each submittal that is to be received by EPA or the state from the ERC provider.[39] TDEC generally agrees with the content EPA is requiring in these submittals.

With regard to demand-side EE EM&V in particular, EPA proposes requirements that would be presumptively approvable if included in state regulations governing how EE is to be quantified by EE providers and verified by independent entities acting on behalf of the state. EPA is proposing that it is presumptively approvable to quantify EE savings as the difference between actual metered electricity usage after an EE program, project, or measure is implemented, and a common practice baseline (CPB).[40] EE providers are able to select from three categories of EM&V methods to determine savings: project based M&V, deemed savings, and comparison group approaches. EPA proposes that annual savings values must be quantified using the three categories of methods at specified time intervals[41] on a recurring basis over the effective useful life of the EE project or measure in order to ensure accurate and reliable savings values. In order for deemed savings approaches to be presumptively approvable, EPA proposes that those values must be documented in a publicly available Technical Reference Manual (TRM) accessible on a public website and are updated at a minimum of 3 years to reflect per-measure MWh savings documented in ex-post EM&V studies that apply M&V or comparison group methods.[42] TDEC is generally supportive of these demand-side EM&V requirements, as they strive to strike an appropriate balance between EM&V rigor and existing practices used by utilities throughout the state.

EPA also specifies which types of demand-side EE projects might qualify as eligible for earning ERCs in a rate-based trading approach (and in a rate-based approach generally). EPA proposes that any demand-side EE program, project, or measure that results in MWh savings may be potentially eligible to generate ERCs, provided that it meets the presumptively approvable provisions for eligibility,[43] and that supporting EM&V is rigorous, transparent, credible, complete, and fulfills the requirements provided in the emissions guidelines and the state plan. Examples provided by EPA include: publicly or utility-administered EE programs; project-based EE evaluated site-by-site[44]; state and local government building energy code and compliance programs; and state and local government incremental product energy standards.[45] TDEC is supportive of these demand-side EE requirements for eligibility. ***However, TDEC recommends that EPA explore opportunities to pursue formulaic crediting for common federally- and state- administered or funded EE programs, such as the U.S. Department of Energy's Weatherization Assistance Program. Establishing a formulaic approach would enable states to streamline processes for crediting emissions reductions under these programs while creating consistency with regard to EM&V across all states.***

EPA also proposes qualifications for independent verifiers within the context of a rate-based trading plan approach. As proposed, only verifiers approved by EPA may provide verification services related to ERC issuance for the federal plan. In the context of a state plan using the rate-based trading approach, only verifiers approved by the state may provide verification services related to ERC issuance for the state's plan. EPA is proposing that verifiers must have sufficient knowledge of the rate-based emission trading program rules, technical expertise, and knowledge of auditing, accounting, and information management practices in order to

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[39] *Id.* at 65003.

[40] *Id.* at 65005-65006. A CPB is the equipment that would most frequently be installed at the time an existing piece of equipment fails or is replaced at the end of its effective useful life—or that a typical consumer or building owner would have continued using for the remainder of the equipment's effective useful life—in a given circumstance at the time of EE implementation, i.e. what would have commonly happened in the absence of the EE program, project, or measure.

[41] *Id.* at 65006. A minimum of 4-year intervals for building energy codes and product standards. Every 1, 2, or 3 years for publicly- or utility-administered EE programs, and annually for large individual commercial and industrial projects, unless the EE provider can demonstrate why this is not possible and how the accuracy and reliability of savings will be maintained.

[42] *Id.*

[43] See 80 Fed. Reg. at 64994-64997.

[44] E.g., ESCO projects at commercial and industrial facilities.

[45] 80 Fed. Reg. at 65007.

perform verification services related to the Clean Power Plan. Verifiers also must be independent, having no financial management or other interest for an eligible resource for which they are providing verification services. These requirements must be documented in the verifier's application for accreditation to EPA, or in the case of a state plan, by the state.[46] ***TDEC generally supports EPA's proposed qualifications for independent verifiers, but recommends that EPA consider taking responsibility for approving independent verifiers and making that list publicly available not only in the rate-based federal plan context, but in any plan context. This would significantly streamline state review of project submittals while also creating consistency of implementation of verifier requirements across all states.***

c. Banking of ERCs

EPA proposes to allow unlimited banking of ERCs within and between the interim and final compliance periods but requests comment on whether there should be a quantitative limit on the number of ERCs that can be banked. Additionally, EPA does not propose to allow ERC borrowing, but requests comment on this topic.[47] We encourage EPA to allowing unlimited banking of ERCs within and between interim and final compliance periods in the final rate-based trading approach but are not supportive of the concept of ERC borrowing. ERC borrowing would trigger accounting complexities for states and would place the stringency of Clean Power Plan emissions standards at risk.

IV. Mass-Based Approach

As proposed, EPA's mass-based approach to a federal plan or model rule would establish a mass-based trading program (allowance system) which would establish an aggregate emissions limit in short tons for affected EGUs included in the program and create allowances that authorize a specific quantity of emissions in short tons. Each facility with affected EGUs in the program must surrender allowances equal in number to the quantity of the emissions of its affected EGUs during each compliance period. Affected EGUs may buy allowances from or transfer or sell allowances to other affected EGUs or other entities that participate in the market.[48] As proposed, the aggregate emissions limit and interim step period emissions limits for a state are its statewide mass-based goals included in the final Clean Power Plan.[49] EPA proposes that a state covered by a mass-based federal plan may determine its own approach to distributing allowances. If a state chooses not to do so, EPA would distribute allowances according to its proposed allocation approach.[50] Sources would be required to demonstrate compliance (i.e., allowance true-up) at the facility level in multi-year compliance periods as finalized in the Clean Power Plan.[51] Specifically, sources would be required to demonstrate compliance on May 1 of the year following the last year in each compliance period.[52] TDEC is generally supportive of these proposed design elements.[53]

a. Allowance Distribution

EPA proposes to provide states flexibility to determine their own approach for distributing allowances in both a mass-based federal plan and mass-based model rule approach. In the case of a mass-based federal plan, if a state

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[46] *Id.* at 65001-65002.
[47] *Id.* at 65010.
[48] *Id.* at 65011.
[49] *Id.* at 65012. If interstate trading occurs from one state's mass-based federal plan to another's, the sum of the mass goals for states in the trading program would form the aggregate emissions limit.
[50] *Id.*
[51] *Id.* at 65014. Compliance periods finalized as 2022-2024, 2025-2027, and 2028-2029 and every two years thereafter beginning in 2030.
[52] *Id.* As proposed, the allowance transfer deadline for the first compliance period would be May 1, 2025.
[53] With regard to the allowance transfer deadline in particular, TDEC recommends that EPA not consider a transfer deadline any earlier than May 1, as EGUs would not be provided sufficient time to determine whether they need to buy, sell, bank, or trade allowances.

does not choose to distribute its own allowances, EPA would distribute allowances to EGUs within the state and is taking comment on proposed approaches for allowance distribution.

As proposed, in a mass-based federal plan approach where EPA is responsible for allowance distribution, the majority of allowances would be allocated to affected EGUs based on average share of historical generation over the 2010-2012 period.[54] TDEC concurs with EPA's proposed approach of relying on historical data, as this data is known rather than projected. However, TDEC notes that using generation data represents an inconsistent approach from that used in developing the final emission guidelines, which relied upon historical emissions data to establish emissions performance standards. ***Therefore, TDEC recommends that EPA allocate the bulk of allowances to affected EGUs based on average share of historical emissions over the 2010-2012 period in a mass-based plan rather than average share of historical generation over the 2010-2012 period.***

EPA also proposes several alternative allocation approaches to distributing the majority[55] of allowances to affected EGUs. The first would divide the total number of allowances from a state's mass goal into affected EGU categories before determining unit-level allocations, such that initial distribution of allowances would be closer to the future category-level pattern of allowances.[56] A number of other examples of allocation approaches are referenced by EPA in the proposal, including but not limited to: an auction to allocate allowances; updating allocations for future compliance periods based on future activity; or allocating a portion of allowances to load-serving entities (LSEs) rather than to affected EGUs.[57]

As previously indicated, TDEC's preference in a mass-based approach would be to allocate allowances to affected EGUs based on average share of historical emissions over the 2010-2012 period. ***TDEC is not supportive of the concept of allowance distribution via auction.*** Given that there is only one utility with affected EGUs in the state, and therefore only one bidder on all allowances, this approach does not make sense in Tennessee. Additionally, it is our understanding based on conversations with other states that the overhead costs associated with administering an auction can be considerable. Such costs could detract from other environmental programs competing for limited funding resources.

In the proposal, EPA included generation from all units that operated in the historical data set in the proposed allowance calculations and calculated allowances for all such units.[58] ***TDEC supports EPA's issuance of allowances to units that operated in the historical data set but have since retired.*** The Clean Power Plan requires utilities to take various steps to reduce emissions in order to comply with emissions standards, including but not limited to reducing emissions from coal fleets via reduction in use or retirement, shifting generation to NGCC, and increasing renewable generation. In order to be able to continue to operate fossil fuel-fired units, a utility will need to utilize allocations made available through implementation of compliance measures, including those resulting from the retirement of existing coal-fired units. Therefore it is important that affected EGUs are capable of utilizing allowances from those early retirements. This also would serve to incentivize early action to reduce emissions.

EPA proposes to record allowances for each compliance period in source accounts prior to the start of each compliance period, and to record allowances for one compliance period at a time. EPA notes that doing so provides certainty to affected EGUs and can facilitate long-term planning. Specifically, as proposed, allowances would be recorded in accounts of affected EGUs 7 months prior to the start of each compliance period. EPA also requests comment on an alternative recording of allowances at 13 months prior to the start of each compliance

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[54] *Id.* at 65016.
[55] Remainder of allowances within a state's mass-based goal would be distributed to set asides.
[56] 80 Fed. Reg. at 65018. EPA notes that this approach could potentially reduce transfer of wealth between parties that may occur as a result of a less-anticipatory initial allocation procedure.
[57] *Id.*
[58] *Id.* at 65016.

period.[59] ***We support the later recordation schedule of 7 months prior to the start of each compliance period, as this maximizes state flexibility to take into account more recent information when determining allocations.***

b. Allowance Set-Asides

EPA also proposes to create three allowance set-asides in a mass-based federal plan and model rule approach. The first would set aside a portion of allowances in each compliance period with the exception of the first compliance period for distribution to affected EGUs via an updating output-based approach (output-based set aside). The second would set aside five percent of allowances in each state in all compliance periods to be distributed to RE projects (RE set aside). The output-based allocation set aside and RE set aside are proposed by EPA to satisfy the requirement in the final emission guidelines that mass-based plans address the risk of leakage to new unaffected units. The final set aside would set aside a portion of allowances in each state from the first compliance period for utilization during the Clean Energy Incentive Program (CEIP).[60] TDEC's comments regarding the CEIP set-aside are referenced in Section V, which discusses the CEIP program more broadly.

i. Output-Based Set Aside

The output-based set aside would provide a limited number of allowances from a state's total allowances in a mass-based federal plan or model rule to existing NGCC units that exceed a 50 percent capacity factor. Starting in the second compliance period, allowances from the output-based set aside would be distributed based on each existing NGCC unit's electricity generation during the previous compliance period. Above a certain generation level, the more the NGCC generates above this level, the larger the allowance allocation for which it is eligible. As proposed, only NGCC units subject to the final emission guidelines are eligible to receive allowances from the output-based set aside. However, EPA is taking comment on extending allocation to two additional sources: affected steam generating units (SGUs) and zero-emitting generators.[61] ***TDEC is not supportive of extending the output-based allocation to SGUs, as this would incentivize operation of higher-emitting units, which is entirely inconsistent with building block 2 of the final emission guidelines. TDEC is not supportive of extending the output-based allocation to zero-emitting resources—RE resources in particular. As proposed, EPA has already established a separate set-aside for RE, and generators may utilize allowances allocated as part of this set aside.***

EPA proposes to determine the size of the output-based set-aside using 2012 baseline data from the Clean Power Plan emission guidelines. Specifically, the set-aside would be equivalent to 10 percent of NGCC capacity in the state multiplied by the hours in a year multiplied by the allocation rate for the set-aside.[62] EPA proposes to set the output-based set aside allocation rate equal to the rate-based emission standard for new NGCC units under 111(b) (i.e., an additional MWh of eligible generation would earn the affected EGU allowances equal to the level of emission permitted per MWh of net generation under the 111(b) new source standard) and to calculate an NGCC unit's capacity factor based on the previous compliance period's net generation[63] and the net summer capacity[64] of the unit. However, EPA requests comment on other potential allocation rate approaches, NGCC capacity calculation approaches; and output-based set-aside calculation approaches.[65] Generally, TDEC is supportive of EPA's proposed approach to determining the size of the output-based set-aside. With regard to allocation rate, TDEC is supportive of an allocation rate that is consistent for all NGCC units subject to the emission guidelines, rather than one that would vary from one state to another and over time, and therefore would be supportive of EPA's proposed approach to use the rate-based emission standard for new NGCC units under 111(b). With regard

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[59] *Id.* at 65018-65019.
[60] *Id.* at 65025-65027.
[61] *Id.* at 65020-65021.
[62] *Id.*
[63] *Id.* To be reported to EPA.
[64] *Id.* To be reported to the U.S. Energy Information Administration.
[65] *Id.*

to EPA's proposed methodology for calculating capacity, TDEC recommends that EPA provide states flexibility to select an approach for calculating capacity so long that the parameters utilized as inputs are readily available, consistently defined, and reliable.

As proposed, if the amount of total generation eligible for the output-based set-aside multiplied by the allocation rate exceeds the size of this set-aside, the allowances in this set-aside would be allocated to eligible generation on a pro-rata basis. Additionally, EPA proposes that if the number of the allowances allocated from the set aside is less than the size of the set aside, then the remaining allowances would be distributed to all affected EGUs using a historical generation-based approach.[66] TDEC agrees with EPA that unused allocations from the output-based set-aside should be distributed to all affected EGUs in a state. Any other distribution method would be inconsistent with the intent of the output-based set-aside.

Notice of the capacity and generation data used to calculate allocations from the set-aside and the resulting allocations would be provided by August 1 of the first year in each compliance period. A 30 day comment period on the data and allocations would ensue. EPA proposes to provide notice of the final set-aside allocations and record the allocations in source accounts by November 1 of the same year.[67] The public notice and final allocation approach for the output-based set aside that EPA proposes is reasonable. However, TDEC recommends that EPA clarify whether a state would be required to include provisions that are identical to the federal plan and model rule provisions in order for a state plan to be presumptively approvable. Similarly, EPA should also clarify requirements pertaining to state provisions for presumptive approval in circumstances in which a state opts to take over aspects of a federal plan.

ii. RE Set-Aside

EPA also proposes a set-aside for RE projects in both a mass-based federal plan and a mass-based model rule. In the case of a federal plan, the set-aside would be created by EPA; under a model rule, the state would create the set-aside. As proposed, 5 percent of allowances will be reserved from the allocation for each state for the RE set-aside prior to each compliance period.[68] Eligible RE projects include on-shore wind, solar, geothermal power, and hydropower that is quantified by a revenue-quality meter. New nuclear units and capacity uprates at existing nuclear units and demand-side EE are not eligible to receive set-aside allowances as proposed. Once allowances have been distributed to all approved providers, as proposed by EPA, any remaining allowances in the set-aside would be redistributed to affected EGUs in the state in a pro rata fashion on the same distribution basis as initial allocations were made.[69] TDEC agrees with this proposed method to redistribution of unused allowances. Failure to redistribute in this fashion could potentially lead to leakage.

TDEC does not object to EPA's proposed eligible RE projects for the RE set-aside, but strongly encourages EPA to expand the RE set-aside to include new nuclear capacity, both under-construction nuclear and uprates at existing nuclear facilities. The construction and operation of new nuclear capacity can significantly reduce the need to add new 111(b) applicable fossil fuel generation, and therefore in fact does address the risk of leakage which EPA intends to prevent via set-asides while providing reliable, zero-emitting, and cost-effective electricity. This is particularly true in the context of under-construction nuclear projects near completion; customers are already bearing the costs of these projects, which are significantly underway and beyond the planning and development phase, and are further easily metered due to size.[70] Additionally, nuclear energy

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[66] *Id.* at 65022.
[67] *Id.*
[68] *Id.*
[69] *Id.* at 65024.
[70] *Id.* at 65022. EPA notes: "We do not think a set-aside used as an incentive for incremental nuclear capacity is a useful way to address leakage to new sources during the performance period, due to unique costs and development timelines for incremental nuclear power."

consistently has the highest utilization of any type of electric generation,[71] and should not present any challenges with respect to streamlined implementation of projection-based EM&V requirements. For example, in Tennessee, TVA recently completed construction of Watts Bar Unit 2, which once fully operational is expected to avoid 6-8 million tons of CO_2 emissions annually and produce enough electricity to supply approximately 650,000 homes daily.[72] TVA and the citizens of Tennessee have made a significant investment over many years to complete the construction of Watts Bar Unit 2, and this zero-emitting generation resource should be afforded the same set-aside opportunities as other zero-emitting generation resources.

EPA also requests comment on the expansion of the RE set-aside to additional sources, such as demand-side EE, other types of RE projects, combined heat and power, and waste heat to power.[73] ***We believe that states should be provided flexibility to utilize the (currently named) RE set-aside for zero-emitting generation that fits their specific needs, which may include other RE and EE measures, provided that they are capable of meeting documentation and projection-based EM&V requirements.[74] TDEC supports EPA's requirement of submittal of M&V reports containing the amount of RE generated (or electricity consumption reduced in the case of EE) such that states are capable of documenting emissions reductions that have resulted from allowances included as part of set-aside. Additionally, TDEC is supportive of EPA's proposed disqualification of providers which repeatedly result in deficits in projected and realized MWh generated or avoided.***

EPA proposes that RE projects eligible for the RE set-aside must be located in the mass-based state for which the set-aside has been designated. However, EPA requests comment on whether capacity outside the state should be recognized.[75] ***TDEC believes that out-of-state RE projects should be eligible for the RE set-aside if the RE generation is purchased by an in-state entity that can demonstrate via contract or power purchase agreement that the generation will be used within the state. RE projects intended to count towards an RE set-aside in another mass-based state should not be eligible for either the RE set-aside, allowances, or ERCs in its generation state to avoid double counting.***

As proposed, RE set-aside allowances would be distributed to approved RE providers on a pro rata basis, with the number of allowances distributed to each provider according to the percentage of total approved RE MWh for that state that the approved MWhs from their project represent. However, EPA also requests comment on whether the maximum number of allowances that can be received per MWh should be restricted.[76] ***We recommend that EPA establish a maximum number of allowances that an RE project can receive per MWh of generation.*** Failure to do so would decrease the stringency of the emission performance standards through its neglect of addressing leakage to new units. If EPA allowed a project to receive allocations that disproportionally exceed the amount of generation (and in turn, emissions) that are avoided, the excessive allowances would enable fossil fuel-fired generation to emit more CO_2 without an equivalent reduction from RE generation or other sources. Moreover, additional generation would still be required to account for any excess allocations issued, thereby encouraging leakage to new sources. Based on these considerations, ***TDEC recommends that the ratio of allowances to MWh be established at 1 allowance per MWh***. We reached this ratio based on the likelihood that RE generation from the RE set-aside will reduce generation at fossil steam units, and the fossil steam rate for the Eastern Interconnect

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[71] "U.S. Capacity Factors by Fuel Type, 2014." Nuclear Energy Institute. http://www.nei.org/Knowledge-Center/Nuclear-Statistics/US-Nuclear-Power-Plants/US-Capacity-Factors-by-Fuel-Type.

[72] Johnson, Bill. "Report from President and CEO." Tennessee Valley Authority Board of Directors Meeting. Knoxville, Tennessee. 21 Aug. 2015.

[73] 80 Fed. Reg. 1 at 65023.

[74] *Id.* at 65024. EPA proposes that a satisfactory demonstration of the future RE generation from an eligible project must use technically sound quantification methods that are reliable, replicable, and accompanied by underlying analytical assumptions and verifiable data sources used to demonstrate future performance. These methods, assumptions and data sources must be specified in documentation accompanying the projections. These projections and supporting documentation should all be provided in the set-aside project application, and that application must be approved by a third-party verifier.

[75] *Id.* at 65023.

[76] *Id.* at 65024.

after application of Building Block 1 is 2,071 lb/MWh. Therefore, it is reasonable to assume that 1 MWh of RE generation would offset 2,071 lb of CO_2 emissions.

c. Allowance Banking

Within a mass-based trading approach, EPA is proposing to allow the banking of allowances for use in any future compliance period without restriction.[77] TDEC is supportive of unlimited banking of allowances for use in any future compliance period. EPA also proposes not to permit borrowing of allowances across compliance periods but requests comment on enabling allowance borrowing.[78] TDEC opposes permitting borrowing of allowances across compliance periods, as this would create uncertainty within the trading market and lead to challenges with regard to enforceability of emissions standards within a given compliance period.

d. Allocations to Units that Change Status

EPA proposes that if an affected EGU does not operate for two consecutive calendar years, then starting with the next compliance period for which allowances have not yet been recorded, the allowances that would otherwise have been allocated to the unit would be allocated to the RE set-aside for the state in which the retired unit is located. EPA also requests comment on several alternative approaches, such as allocating allowances from retired units to the output-based set-aside or redistribution to EGUs in a pro-rata fashion.[79] ***TDEC disagrees with EPA's proposal to allocate allowances from retired units to the RE set-aside.*** The Clean Power Plan allows utilities to take various steps to reduce emissions in order to comply, including but not limited to reducing emissions from coal fleets via reduced utilization or retirement, shifting generation to NGCC, and increasing renewable generation. In order to be able to continue to operate coal-fired units, a utility will need to utilize allocations made available through implementation of other compliance measures, including those resulting from the retirement of existing coal-fired units. ***Therefore, TDEC advocates for allowances from retired units to be distributed to the remaining affected EGUs in the state on a pro-rata basis unless the retired unit is being replaced by a new units not subject to the Clean Power Plan. Allowances that would have been allocated to retired units should only be reallocated to an RE set-aside in circumstances in which the retired units are being replaced by non-affected units.[80] We advocate for a similar treatment of allowances from modified or reconstructed units that are no longer affected EGUs.***

e. State-Determined Allowance Allocation

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[77] 80 Fed. Reg. at 65014.

[78] *Id.*

[79] *Id.* at 65026-65027. As proposed, the number of years of non-operation for which a retired unit would receive allocations would vary depending on when a unit retires.

[80] As an example, TVA's retired John Sevier coal-fired units 1 through 4 would receive 1,516,895 allowances during the first compliance period. These units were replaced by John Sevier NGCC units 1 through 3, which are subject to the Clean Power Plan. Therefore, the retirement of John Sevier coal-fired units did not lead to leakage to new units. In 2015, TVA announced that it will retire the existing coal-fired EGUs at its Allen Fossil Plant and replace them with a new NGCC plant. The new NGCC units will have a greater capacity than the coal units being retired and these units will be subject to the 111(b) standards, not the Clean Power Plan. In this circumstance, it would be reasonable for the 2,960,878 allowances that would have been allocated to the existing coal-fired units 1 through 3 at Allen to be allocated to the RE set-aside. Johnsonville Units 5 through 10 retired in 2015 and the remaining units will retire by the end of 2017. These units would receive a total of 3,053,153 tons of allocations during the first period and it is currently unknown whether new fossil-fired units will be added at this site in the future or whether the generation from these retired units has been compensated by shifts among existing assets within TVA's fleet. If new units are constructed to compensate for this generation which would not be subject to the final emission guidelines, the allocations that would have been awarded to Johnsonville should be allocated to the RE set-aside. However, if no new units are constructed to compensate for retired generation, they should be available for distribution to affected EGUs.

As previously indicated, EPA proposes to allow any state to replace EPA-determined federal plan allowance distribution provisions in a mass-based trading program with state-developed allowance-distribution provisions. TDEC is entirely supportive of a state-determined allocation option and the flexibility that it provides. ***However, we feel that EPA should generally provide greater clarity with regard to distinctions between a partial state plan; a state-allowance distribution methodology; and state adoption of a presumptively-approvable mass-based model rule.*** As currently described in EPA's proposal, all three of these terms are discussed similarly, and it is difficult to understand how EPA envisions one concept to differ from another, and therefore the different requirements for or within a state that each would entail.

EPA also requests comment on an alternative approach by which a state could notify EPA of its intent to submit a state allowance-distribution methodology in advance, in which case the agency would hold off on recording EPA-determined allocations to allow more time for state-determined allowances to be recorded.[81] TDEC is supportive of this approach as it would preserve the state's ability to determine allowance allocations while accommodating delays beyond EPA's schedule due to unforeseen circumstances. However, TDEC recommends that EPA specify in the final guidelines any required deadlines by which state-determined allowances must be received by EPA; as proposed, this is unclear. Similarly, in the context of states entering and exiting the federal trading program,[82] TDEC is supportive of the alternative that would allow a state to provide EPA notice of its intent to submit a plan and for EPA to delay recording of federal plan allowances. This provides states with flexibility to accommodate potential delays, such as those resulting from state rulemaking processes, in submitting a complete state plan.

V. Clean Energy Incentive Program Implementation[83]

EPA's CEIP has been created as a component of the Clean Power Plan to incentivize early investment in RE generation and demand-side EE measures prior to the start of the compliance period in 2022. Participation is voluntary for states developing their own compliance plans, and mandatory for states covered by EPA's federal plan. Under the CEIP, credits would be set aside to award for early action. For each early action credit awarded (by a state or in the case of a federal plan, by EPA) for reductions achieved or generation avoided in 2020 and 2021, EPA will provide the state with a matching credit; on a one-to-one basis for RE and on a two-to-one basis for EE in low-income communities. A state may set aside allowances from its interim CO_2 emission budget or may issue early action ERCs and provide those allowances or ERCs to eligible projects for the megawatt-hours (MWh) they generate or energy savings achieved during 2020 and/or 2021.[84] EPA has established a pool of allowances or ERCs for this purpose equivalent to 300 million short tons of CO_2 emissions and will distribute these allowances among states choosing to participate.[85] EPA describes eligible projects as those that:[86]

- Are located in or benefit a state that has submitted a final state plan that includes requirements establishing its participation in the CEIP;
- Are implemented following the submission of a final state plan to the EPA, or after September 6, 2018, for a state that chooses not to submit a complete state plan by that date;
- For RE: Generate metered MWh from any type of wind or solar resources;
- For EE: Result in quantified and verified electricity savings (MWh) through demand-side EE implemented in low-income communities; and

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[81] 80 Fed. Reg. at 65029.

[82] *Id.*

[83] TDEC submitted comments to EPA's request for input regarding the CEIP. See "Memorandum to Administrator McCarthy from TDEC Commissioner Bob Martineau (December 15, 2015) Re: Tennessee Department of Environment and Conservation Comments regarding EPA's Clean Energy Incentive Program, Docket ID Number EPA-HQ-OAR-2015-0734" for additional CEIP comments.

[84] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units. 80 Federal Register No. 205. (October 23, 2015). U.S. EPA. http://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf, p. 64675-64676. (to be codified at 40 CFR Part 60).

[85] 80 Fed. Reg. at 64676.

[86] *Id.*

- Generate or save MWh in 2020 and/or 2021.

TDEC offers the following comments on specific components of the CEIP in response to EPA's requests for input.[87]

a. Definition of Low Income Community

EPA requests comment on the definition of low-income community as it would be applicable for determining CEIP-eligibility for EE projects. TDEC recommends that EPA consider using an established geographically-based definition[88] in combination with a household-based low income definition[89] that would be conducive to consistent and straightforward application by states, yet encompassing of a broad range of communities that would benefit from lower electric bills. The definition should accommodate demand-side EE measures which occur in households as well as those that may occur outside of the home, including those in businesses, industry, local government, and other community facilities, and should be capable of allowing demand-side EE projects in low-income homes in low-income neighborhoods, as well as low-income homes in non-low-income neighborhoods.

b. EE & RE Project Eligibility

EPA requests comment on what criteria should be used to define eligible wind and solar projects, as well as eligible EE projects implemented in low-income communities. TDEC generally recommends that EPA utilize the same criteria for eligible wind and solar projects that are utilized for wind and solar projects in the final Clean Power Plan, and that eligible RE projects be metered to allow for transparent tracking of MWh generated. Additionally, TDEC recommends that EPA include explicit mention of both revenue quality meters and certified meters as meters meeting eligibility requirements. This would encompass utility and local power company installations that utilize either type of meter for the purposes of identifying official generation data. With regard to EE, TDEC recommends that any project that could produce a measurable and verified reduction in electricity end-use in a low-income community per evaluation, measurement, and verification (EM&V) requirements, both as defined in the CEIP, should be eligible for CEIP early action rewards.

EPA also requests comment on what commencement date is appropriate for a project to qualify as eligible for the CEIP. EPA states in the final Clean Power Plan that eligible projects are those that are implemented following the submission of a final state plan to the EPA, or after September 6, 2018, for a state that chooses not to submit a complete state plan by that date.[90] ***TDEC recommends that EPA provide clear definitions for terms such as "implement," "commencement," "commencement of construction," "commencement of operation," etc. as they apply to the CEIP. Distinctions between these terms are currently unclear to TDEC, yet these terms are important to understanding project eligibility. TDEC further recommends that EPA consider the date of the publication of the final Clean Power Plan in the Federal Register, October 23, 2015, as the commencement date for a project to qualify as eligible for the CEIP.***[91] This would broaden the scope of potential, eligible projects, all of which would be capable of producing savings in 2020 and/or 2021 that are additional to those required during the Clean Power Plan compliance period. An earlier qualification date for CEIP projects would

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[87] As discussed within the proposed federal plan and model rule as well as within EPA's request for input, Clean Energy Incentive Program: Questions and related issues about which EPA is seeking input and ideas. (November 2015). U.S. EPA. http://www.epa.gov/sites/production/files/2015-11/documents/ceip-stakeholdercalls-attachment-november2015.pdf.

[88] E.g., Definition of low-income community under the Internal Revenue Service New Market Tax Credit Program or Community Reinvestment Act.

[89] E.g., Qualification criterial for HUD programs such as the Weatherization Assistance Program or Low Income Energy Assistance Program.

[90] 80 Fed. Reg. at 64676.

[91] Alternatively, EPA could also consider September 6, 2016, the date upon which states are required to submit to EPA a final plan and commitment to participate in the CEIP or submit to EPA an initial plan submittal and request for extension with a non-binding expression of interest in CEIP participation.

also eliminate any incentive to delay CEIP projects until just before 2020, thus ensuring financial and environmental benefits earlier in the implementation process.

Last, TDEC recommends that EPA clearly indicate whether federally supported EE programs or projects are eligible for credits or allowances in the CEIP.

c. EM&V Requirements

EPA also requests comment on what the requirements should be for eligible project EM&V, measurement and verification (M&V) reports for quantified MWh, and verification reports from independent verifiers. TDEC feels strongly that ***EPA must balance what is necessary to verify project generation or savings with the cost and effort required to meet EM&V, M&V, and independent verifier requirements so as not to serve as a disincentive for CEIP participation and early emissions reductions. However, TDEC also recognizes that consistency is important and EPA should attempt to at least somewhat align EM&V, M&V, and independent verifier requirements with those required for ERC issuance in the final Clean Power Plan, while maintaining the ability for states to utilize existing EM&V protocols.***[92]

Additionally, TDEC recommends that EPA consider taking responsibility for approving independent verifiers and making that list publicly available as a means of assisting states with their review of project submittals. This process could be achieved as follows: Independent verifiers should be required to submit applications for accreditation to EPA and EPA should be required to approve or deny such application. A list of EPA-approved independent verifiers could then be made publicly available. This resource could also assist states pursuing a rate-based approach with ERC issuance during the compliance period.

d. Timing and Distribution of Allowances or ERCs

EPA has established a 300 million short ton CO_2 emission equivalent pool for the purposes of matching credits provided by states for emissions reductions from CEIP projects and proposes that CEIP credits will be distributed to participating states on a pro-rata basis proportional to emissions reductions required from a 2012 baseline. TDEC does not oppose this proposed allocation, but notes that the state could fare more or less favorably depending on the number of states choosing or required to participate nationally. For example, if all states participated in the CEIP, TDEC would advocate for equal distribution of the pool of credits to all states above other approaches. The below table provides an illustrative example of how various allocation methodologies would impact Tennessee's share assuming all states participate in the CEIP.

Pro-Rata based on (short tons CO_2 emitted)	**National**	**Tennessee**	**TN Share of Pool**
Emissions reduction required from 2012 to interim step 1 (2022-2024)	599,505,214	7,103,725	1.18%
2012 emissions	2,569,364,153	41,222,026	1.60%
Federal Plan interim step 1 (2022-2024) allowances	1,771,365,987	30,234,302	1.71%
Final guidelines to interim step 1 (2022-2024) allowances	1,969,858,939	34,118,301	1.73%

[92] As previously noted, TDEC recommends that EPA include explicit mention of revenue quality meters as meeting eligibility requirements such that utility and local power company installations that utilize either type of meter would qualify as adequate M&V for the purposes of identifying official generation data. TDEC also recommends that EPA address requirements for meter placement within the context of RE projects completed for the purposes of the CEIP, such as whether meters should be placed at the point of generation, or at the point of interconnection to the larger grid. This distinction could have important implications for crediting of RE generated which does not ultimately result in emissions reductions due to line losses during transmission.

Number of states participating (not expressed in short tons of CO_2 emitted)[93]	*50*	*1*	*2.00%*

EPA also requests comment on how the pool of matching credits should be split between the two reserves for project types: wind/solar and low-income EE.[94] Given the lack of certainty with regard to interest in and commitment to participating in the CEIP from entities which might undertake wind/solar and/or EE projects in low-income communities, it is difficult for TDEC to recommend a specific methodology for dividing credits among project types. Therefore, ***TDEC recommends that EPA structure the matching pool of CEIP credits such that it provides maximum flexibility to states without prescribing an amount for either reserve.*** This would result in allowing both types of projects, wind/solar and EE in low-income communities, to compete for the state's pool and states could make decisions regarding projects based on the characteristics of projects received. Additionally, ***we recommend that EPA provide states the flexibility to utilize unused credits originally dedicated to a specific type of project reserve to be allocated to the other type of project reserve for eligible projects if desired.***

EPA seeks comment on when it should allocate matching allowances or ERCs to a state as well as when awards from allocations should be made eligible to project providers. TDEC recommends that EPA allocate matching allowances upon approval of a state plan which indicates participation in the CEIP or promulgation of a federal plan which requires participation in the CEIP. This would inform potential eligible project providers and state regulators at the earliest possible time of the size of the allocation pool, which leads to more informed decision-making on behalf of states with regard to their ability to accommodate CEIP projects. TDEC also recommends that CEIP allowances and ERCs be issued to project providers upon the state's (state plan) or EPA's (federal plan) approval of a project's M&V report as well as the verification report of the independent verifier. TDEC also suggests that EPA establish a deadline for approval or denial of M&V and verification reports based on the expected time necessary for the administrative and technical review of such plans. States should be capable of establishing their own deadlines for review so long as they are no longer than the EPA established deadlines.

EPA proposes that unused ERCS or allowances dedicated for the purposes of the CEIP would be redistributed among participating states and requests comment on the methods for doing so. Two potential methodologies are offered by EPA in the proposal. The redistribution to states could be executed on a pro rata share based on amount of reductions from 2012 levels the affected EGUs in the state are required to achieve relative to those in other participating states. Or, unused matching EE or RE allowances or ERCs could be swept back into a federal pool and distributed to project providers on a first-come first served basis.[95] ***TDEC recommends that un-awarded CEIP allowances and ERCs be redistributed to states with unmet demand on the same basis as the initial allocations, i.e., proportional to emission reductions required for each state. TDEC is not supportive of allowances or ERCs being swept back into a federal pool and redistributed on a first-come first served basis.***

TDEC does note that redistribution of allowances and ERCs generally could present a challenge with respect to timing. Participating CEIP states will not know until the end of 2021 whether all of their portion of EPA's matching allowances or ERCs will be distributed. Also by that time, other CEIP participating states will have already allocated their early action set-aside, set-aside for leakage, and other allowances to affected EGUs in preparation for the commencement of the compliance period in 2022. It appears as though states will not be in a position to utilize additional EPA matching allowances for CEIP credit even if there is unmet demand for early action credits. ***Therefore, TDEC recommends that EPA address this timing issue within the context of redistribution of unused CEIP credits for additional projects.*** It is TDEC's understanding that some commenters are advocating for a second phase of the CEIP for this purpose.

e. Designing Mechanics of the CEIP

[93] Tennessee's percentage of this share would increase as state participation in the CEIP decreases.
[94] 80 Fed. Reg. at 65001.
[95] *Id.*

EPA requests comment on how EPA should convert the 300 million short ton CO_2 emissions-equivalent matching pool into ERCs (MWh). TDEC notes that there are two potential options for converting CEIP allowances into ERCs. First, EPA has developed two data points for each state that EPA indicates are equivalent: a rate-based blended state goal and a mass-based state goal. It would seem that EPA could use the same conversion factor for each state that is used in the emission guidelines to translate short tons into ERCs. An alternative option is to convert ERCs on a one-to-one basis. The rationale for this approach lies in the fact that ERCs will, in 2020 and 2021, most likely reduce generation from coal-fired EGUs. The current fossil steam rate for the Eastern Interconnect is 2,204 lb/MWh, which is roughly equivalent to a one ton of carbon per one MWh ratio.

Within a mass-based context, early action allowances would be drawn from a third set-aside of allowances from a state's general distribution. As proposed and previously indicated, EPA would distribute CEIP set-aside allowances among the states based upon the amount of the reductions from 2012 levels each state must achieve relative to that of the other participating states.[96] As already mentioned, TDEC advocates for the redistribution of allowances to states with unmet project needs on a pro-rata basis during the initial allocation process. As proposed, any unused EPA matching CEIP allowances that remain in state accounts on January 1, 2023 will be retired by EPA.[97] TDEC requests that EPA clarify in the final federal plan and model rules that state CEIP allowances be available for redistribution to affected EGUs even if EPA's matching allowances are retired.

Finally, EPA requests comment on what mechanisms it should consider for maintaining the stringency of rate-based emission standards during the compliance periods to account for the issuance of early action ERCs for MWh generated or avoided as part of the CEIP. Options noted by EPA include the retirement of the number of ERCs awarded for MWh generated or avoided in 2020 and/or 2021 during the first compliance period or, in the case of a state's adoption of the model trading rule, the adjustment of targets to achieve the same stringency when accounting for borrowed ERCs.[98] While retirement of ERCs may be an option available, the proposal does not explicitly state whether states will be required to retire credits amounting to the state's match of early action credits only or whether they will be required to retire ERCs equivalent to both EPA's and the state's contribution of early action credits (although TDEC assumes the former). TDEC recommends that EPA clarify the methodology for retirement if this is the approach finalized. Moreover, TDEC is unaware of any additional specific mechanisms for ensuring stringency of rate-based emissions standards during compliance periods to account for CEIP credits in 2020 and/or 2021 beyond those mentioned by EPA.[99]

VI. Amendments to Process for Submittal and Approval of State Plans and EPA Actions

a. Deadlines for EPA Actions

As proposed, EPA would update the deadlines for acting on state submittals and promulgating a federal plan for CAA 111(d) state plans. Currently, EPA is required to act on a state plan or plan revision submittal within four months after the date required for submission of a plan or revision and promulgate the proposed federal plan within six months after the date required for plan submissions.[100] The final Clean Power Plan guidelines adjusted this deadline to require EPA to act on a state plan under those guidelines within 12 months of the date for required submission. No modification was made to the six-month deadline for a federal plan. EPA is proposing to amend the current requirements in 40 CFR 60.27(b) to allow EPA 12 months to approve or disapprove submittals of all plans or plan revisions under CAA section 111(d), not just those related to the Clean Power Plan, and is also specifying that the 12-month requirement for EPA to act is based on time transpired since receipt of the plan

[96] *Id.* 65025.
[97] *Id.*
[98] *Id.* at 65000-65001.
[99] Based on TDEC's understanding of the CEIP and the Clean Power Plan, EPA's insertion of additional allowances into the marketplace in the form of a matching pool of credits automatically reduces the stringency of a rate-based emission standard.
[100] 40 Code of Federal Regulations 60.27(b), (c), and (d).

rather than the original deadline for plan submittal. EPA is also proposing to amend requirements in 40 CFR 60.27(c) such that EPA is provided one year rather than six months to issue a final federal plan, and adjusting the deadline for federal plan issuance to run from the date of EPA's action rather than from the original deadline.[101]

Historically, it has been TDEC's experience that EPA does not always meet the similar deadline currently contained in CAA 110 for state implementation plan (SIP) approval. Moreover, neither the existing nor proposed regulations provide a consequence for failure to meet these deadlines. ***Therefore, we suggest that language, similar to that included in the proposed 40 CFR 62.27 (g),[102] be added that specifies that if EPA has not approved or disapproved a plan or revision within the 12 month deadline, that the plan or revision shall, on that 12 month deadline date, be deemed approved by operation of law.*** Additionally, EPA has proposed in 60.27(j) that the Administrator may establish reasonable deadlines (not to exceed 18 months after the date of such notice) for submission of such plan revisions.[103] ***TDEC encourages EPA to adopt a minimum length of time that EPA must allow for the submission of a plan revision to ensure that EPA provides sufficient time for a state to respond to a notice of inadequacy.***

In closing, TDEC appreciates the opportunity to comment on the development of a federal plan and model rules for the purposes of the Clean Power Plan and hopes that this input is of value to EPA. We commend EPA for the continued development of a comprehensive framework for reducing CO_2 emissions from the electric power sector and recognize the significant investment of thought, time, and resources that this effort has required. The outreach that EPA has provided throughout development of all aspects of the Clean Power Plan is unprecedented, and we hope this engagement with stakeholders will continue as the remaining aspects of the Clean Power Plan are finalized and states initiate compliance efforts.

[101] 80 Fed. Reg. at 65038.
[102] *Id.* at 65059.
[103] *Id.* at 65060.